



# Summer 2008 Electricity Supply and Demand Outlook Workshop

January 16, 2008



# Workshop Topics

- Summer 2008 Supply and Demand Outlook
- Peak Demand Overview
- Demand Response and Interruptible Load Programs
- Impact of Hydro Conditions on Capacity



# Purpose of 2008 Supply and Demand Outlook Workshop

- Get stakeholder comments prior to presenting the Governor and Legislature
- Request input on impact of dry hydro conditions on capacity
- Hear comments on how Demand Response and Interruptible Load Programs are utilized



# Summer 2008 Electricity Supply and Demand Outlook

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# Overview

- Changes from 2007 Report
- Planning Reserve Margins
- Cumulative Probability Distribution
- Detailed Assumption Data



# Changes from 2007 Outlook

- Basic methodology is the same
- Updated values to reflect 2008 data
- Relocated Calpine Sutter from SMUD Control Area to CA ISO
- Reduced WAPA CVP Imports by 250 MW to reflect CVP capacity used to meet internal load



# Summer 2008 Electricity Outlooks

- Forecast planning reserve margins
  - Statewide, California ISO, NP26 and SP26
- Probabilistic analysis
  - California ISO, NP26 and SP26
  - Statewide assessment not conducted



# 2008 California Electricity Supply and Demand Outlook

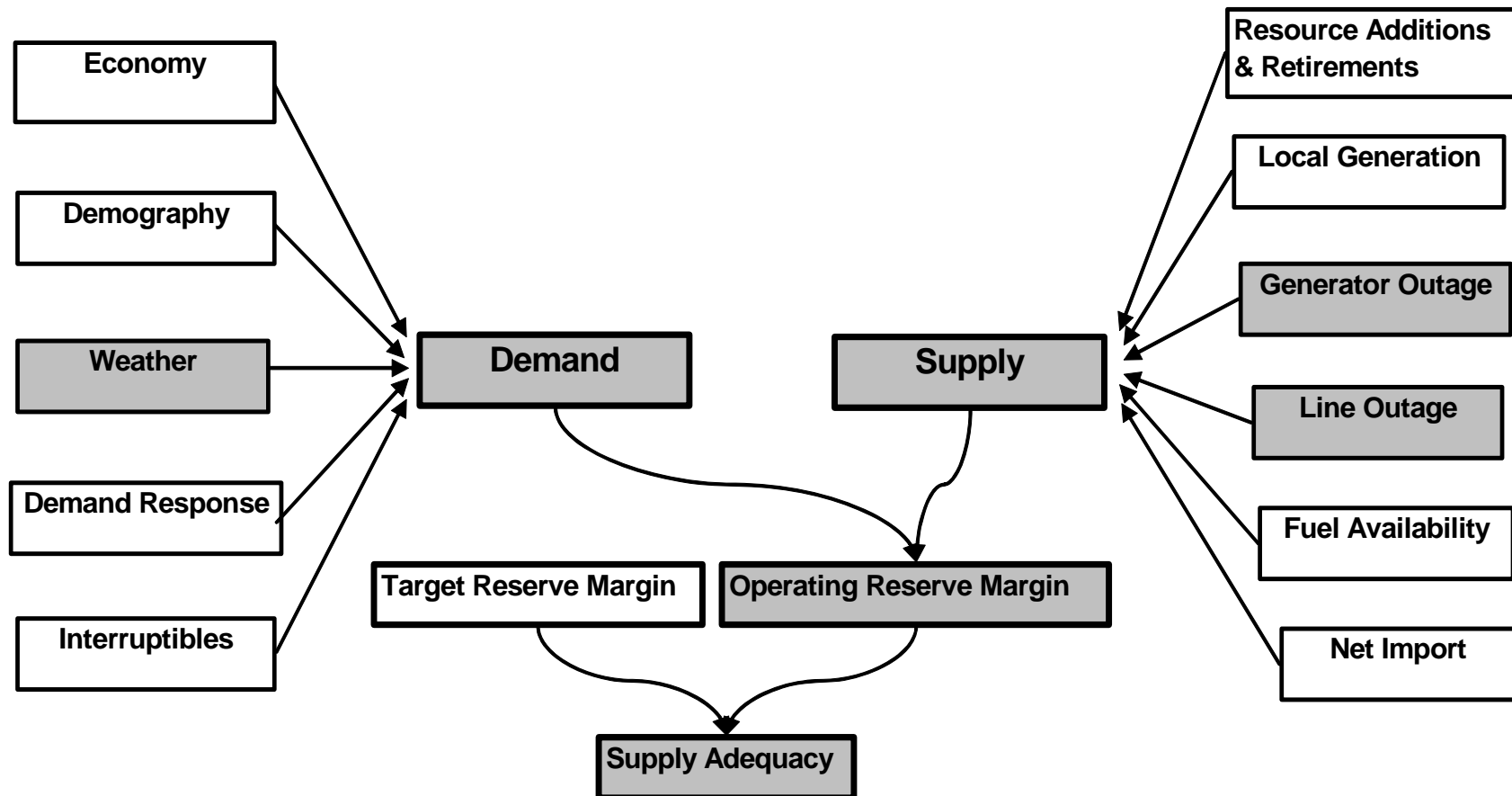
(Megawatts)

<b>(Staff Draft)</b>				
<b>Resource Adequacy Planning Conventions</b>	<b><u>NP 26</u></b>	<b><u>SP 26</u></b>	<b><u>CA ISO</u></b>	<b><u>Statewide</u></b>
1 Existing Generation	25,039	22,277	47,316	58,553
2 Retirements (Known)	0	0	0	0
3 High Probability CA Additions	0	935	935	1,013
4 Net Interchange *	250	10,100	10,350	13,118
5 Total Net Generation (MW)	25,289	33,312	58,601	72,684
6 1-in-2 Summer Temperature Demand (Average)	21,671	28,604	49,071	61,439
7 Demand Response (DR)	458	186	644	644
8 Interruptible/Curtailable Programs	427	1,105	1,532	1,732
9 <b>Planning Reserve</b>	<b>20.8%</b>	<b>21.0%</b>	<b>23.9%</b>	<b>22.2%</b>
<b>Probability of Peak Day Event</b>	<b><u>NP 26</u></b>	<b><u>SP 26</u></b>	<b><u>CA ISO</u></b>	
Probability of Involuntary Firm Load Curtailments (Stage 3)	0.7%	1.6%	0.6%	
* Outlook assumes 3,000 MW flowing North to South on Path 26 at time of peak. This flow could flow South to North, if needed. As SP 26 improves planning reserve margins above NP 26, this assumption should be reduced to a level necessary to balance the planning reserve margins in both regions.				





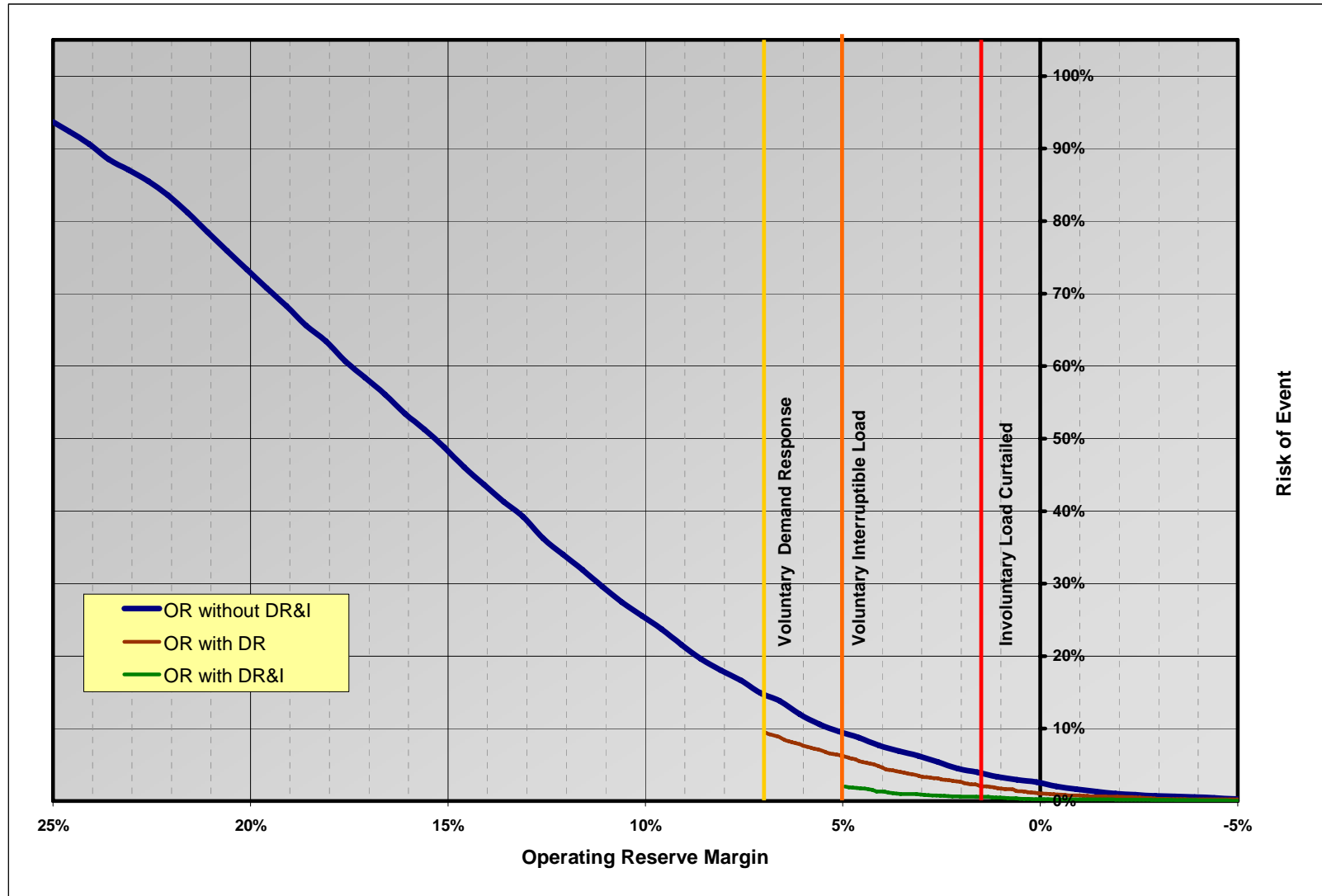
# Major Factors Affecting Supply Adequacy





# Risk of Event

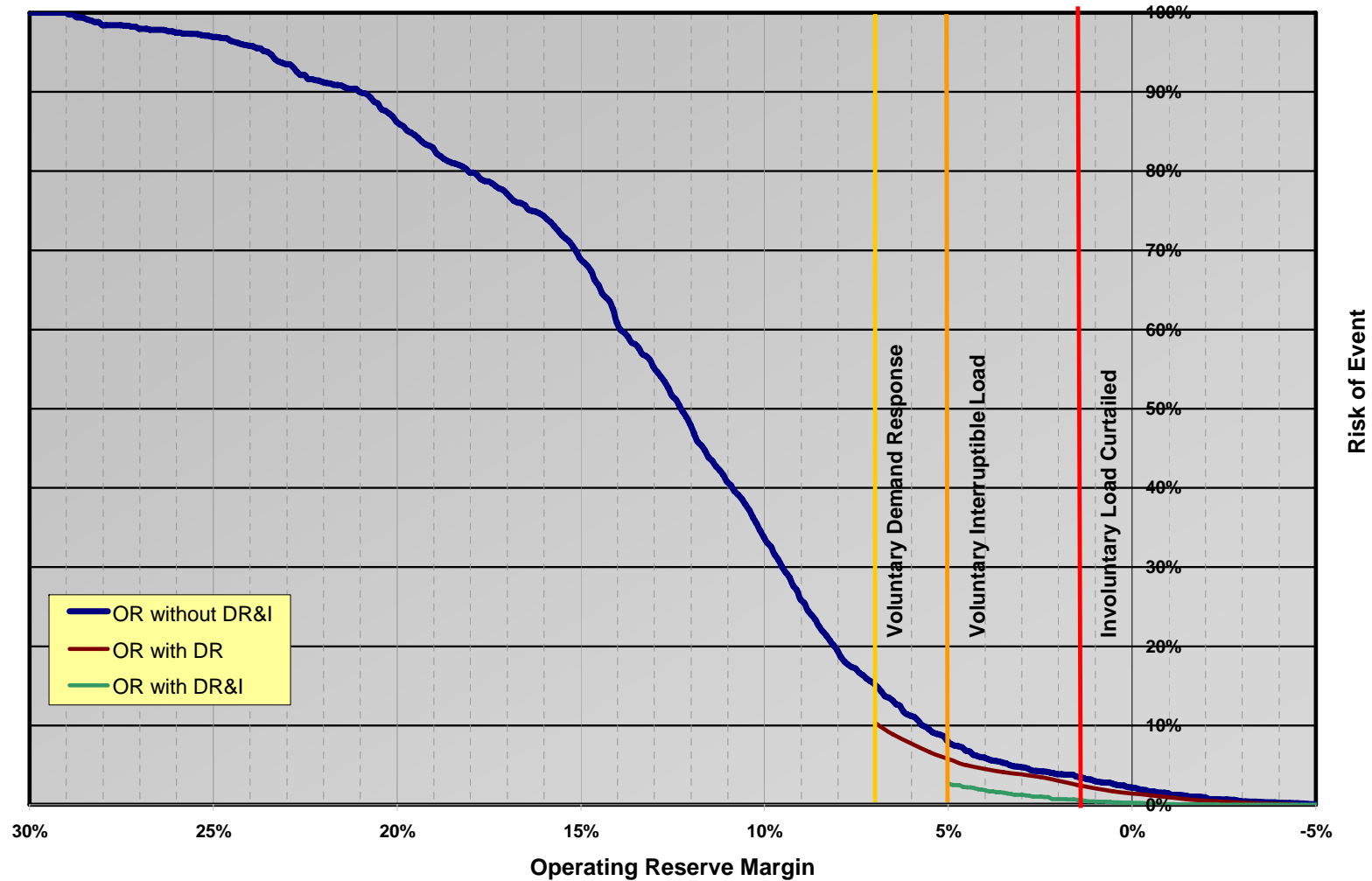
## California ISO – Summer 2008





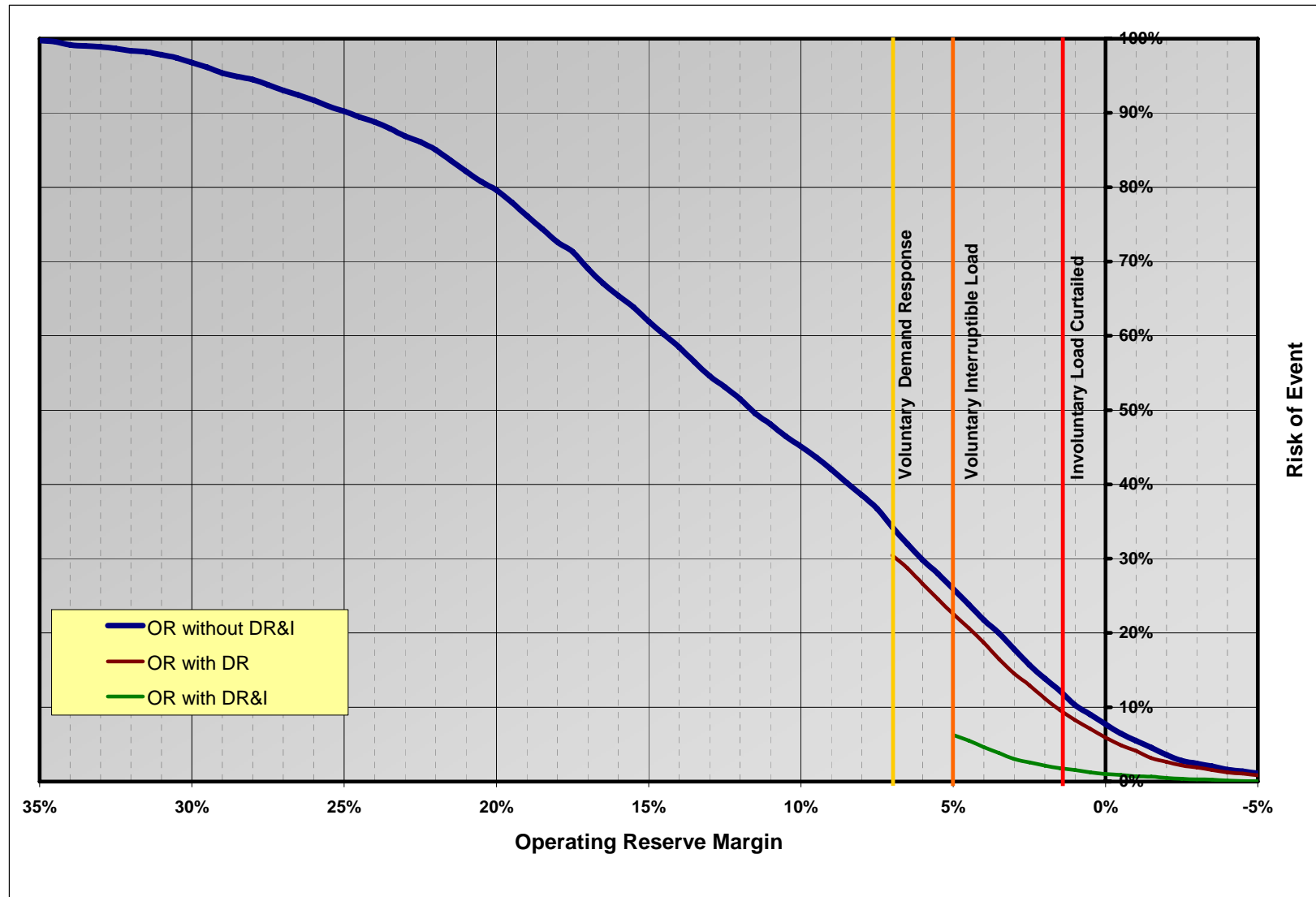
# Risk of Event

## NP 26 – Summer 2008





# Risk of Event SP26 – Summer 2008





# Existing Generation

	SP26	NP26	TOTAL
<b>CA ISO Control Area</b>			
Merchant Thermal & QF	17,049	16,525	33,574
Municipal Thermal	751	182	933
IOU Retained Thermal	3,430	2,393	5,823
Derated Hydro	1,047	5,939	6,986
<b>TOTAL CA ISO</b>	<b>22,277</b>	<b>25,039</b>	<b>47,316</b>
Non-CA ISO	6,523	4,714	11,237
<b>STATEWIDE TOTAL</b>			<b>58,553</b>

- As of August 1, 2007
- Non-CA ISO includes thermal and hydro



# 2008 Additions

CA ISO Control Area					
SP26			NP26		
Additions			Additions		
Name	MW	Expected	Name	MW	Expected
SCE Oxnard	44	Jun-08			
J Power Pala	82	Jun-08			
Wellhead Margarita	44	Jul-08			
Inland Empire	765	Jun-08			
	<u>935</u>				
Non-CA ISO Control Areas					
LADWP & IID Control Areas			SMUD & TID Control Areas		
Additions			Additions		
Name	MW	Expected	Name	MW	Expected
Niland Peaker	78	Jun-08			



# Net Interchange

Statewide	
Northwest Imports	4,000
Southwest Imports	4,100
Pacific DC Intertie (California ISO)	2,000
LADWP and IID Control Areas	3,018
<b>Total</b>	<b>13,118</b>

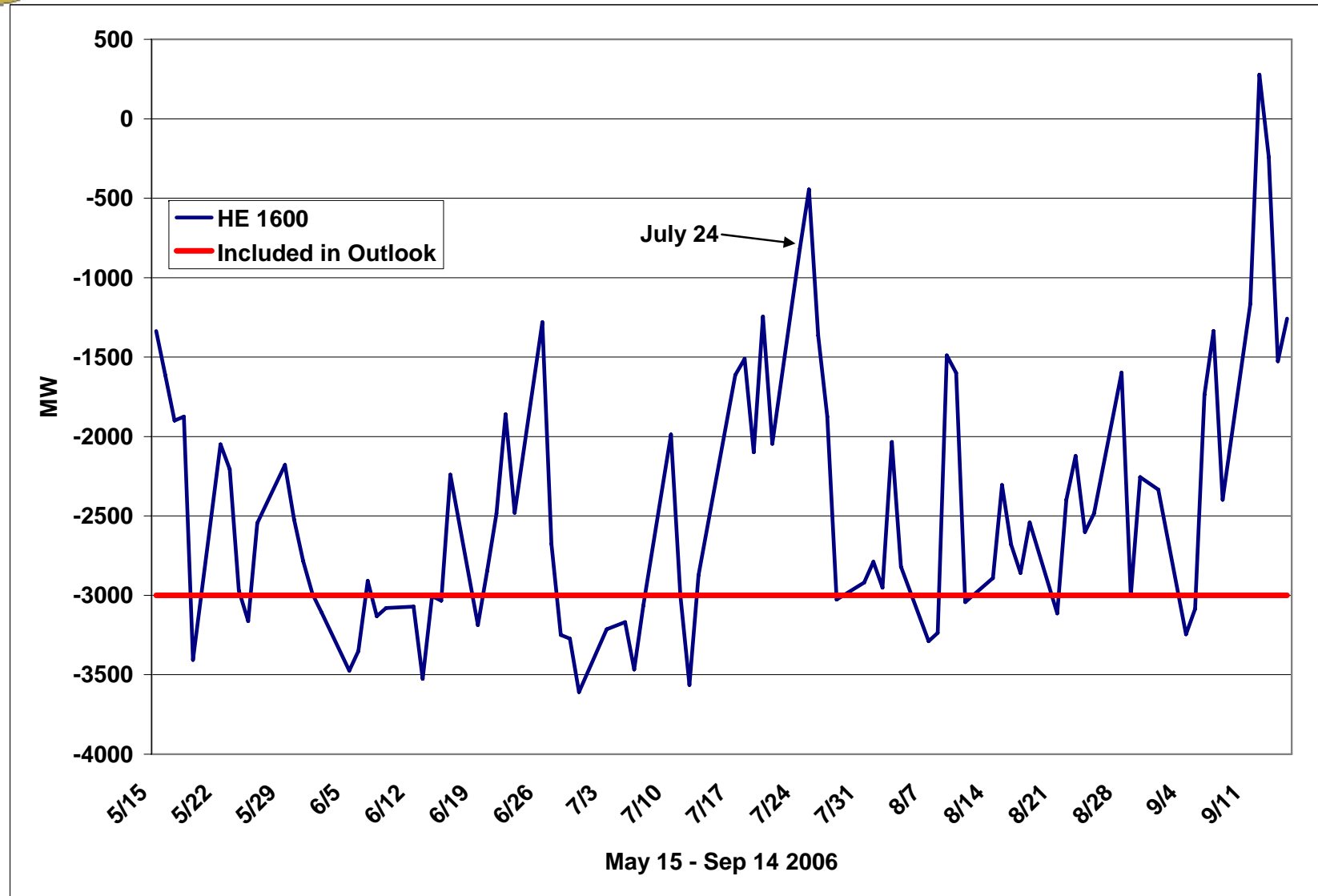
California ISO	
California ISO Share of NW Imports	2,300
Southwest Imports	4,100
WAPA Central Valley Imports	950
Pacific DC Intertie (California ISO)	2,000
Net LADWP Control Area (Wheeled)	1,000
<b>Total</b>	<b>10,350</b>

NP26	
California ISO Share of NW Imports	2,300
WAPA Central Valley Imports	950
Path 26 Exports	(3,000)
<b>Total</b>	<b>250</b>

SP26	
Path 26	3,000
Southwest Imports	4,100
Pacific DC Intertie (California ISO)	2,000
Net LADWP Control Area (Wheeled)	1,000
<b>Total</b>	<b>10,100</b>



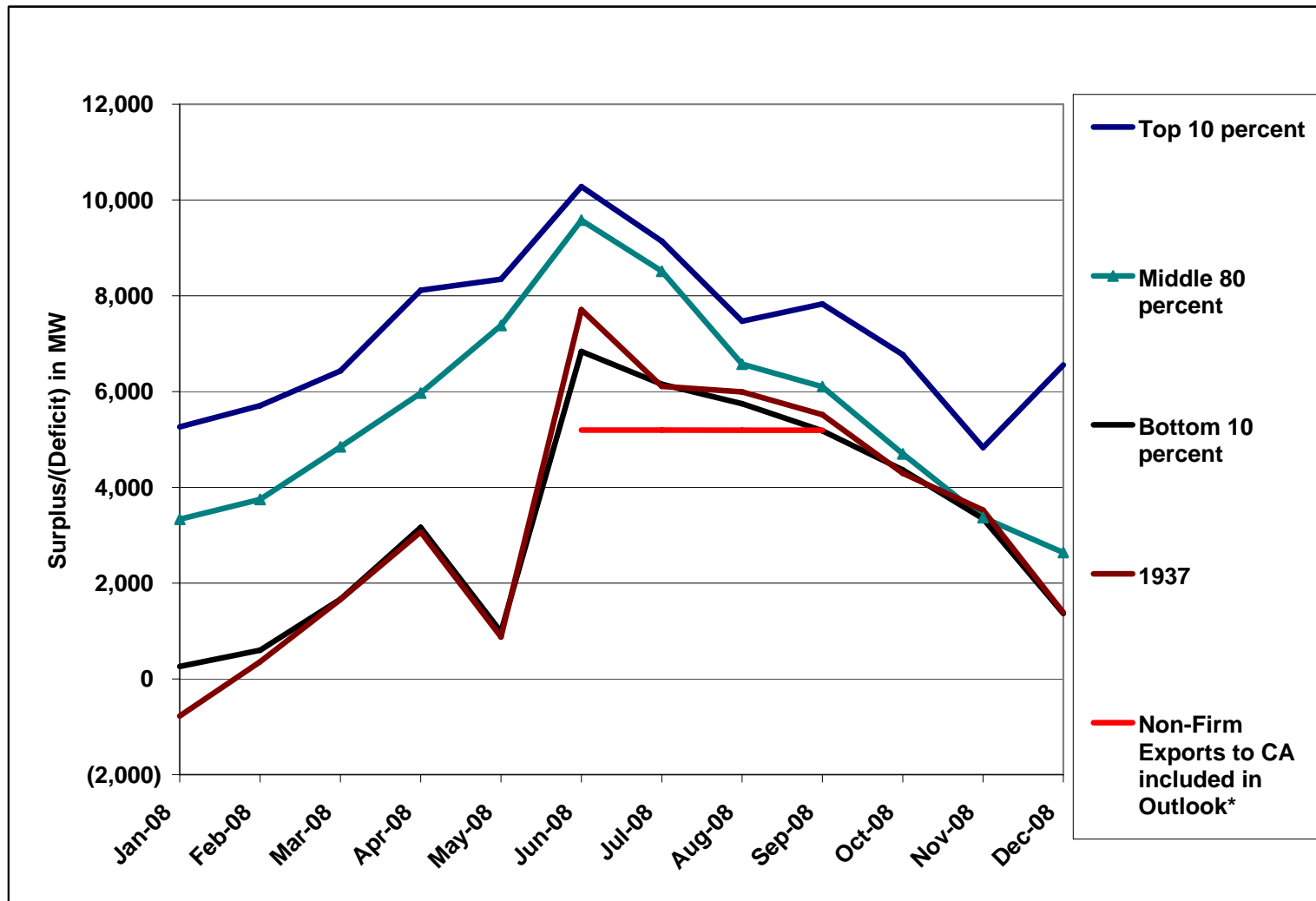
# Summer 2006 Path 26 Net Flows







# BPA Forecast Regional 2008 Surplus/(Deficit) by Water Year



Source: 2006 Pacific Northwest Loads and Resource Study Technical Appendix Vol 2, Section 10 & 12



# Demand Response and Interruptible Load Programs

Demand Response Programs		Expected	
	SCE	SDG&E	PG&E
CPP Programs	3	15.0	48.0
DBP	34	6	55
CBP	75	23	27
CAL-DRP/Spec Contracts	10		308
CI 20/20 or BEC		20	20
<b>Demand Response Sub-Total</b>	<b>122</b>	<b>64</b>	<b>458</b>
<b>Interruptible Load Programs</b>			
I-6 or E-19/E-20			
AL TOU CP			
BIP	476	5	288
ACCP	562	25	96
OBMC/RBRP	3		13
AP-I/Emergency CCP/NF	21	3	30
Clean Gen/Peak Gen		10	
Special Contracts			
<b>Interruptible Sub-Total</b>	<b>1062</b>	<b>43</b>	<b>427</b>
<b>Total</b>	<b>1184</b>	<b>107</b>	<b>885</b>